



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Number : 09/083,198 Confirmation No.: 3687
Applicant : Venkataraman BRINGI, et al.
Filed : May 22, 1998
Title : ENHANCED PRODUCTION OF TAXOL AND TAXANES BY
CELL CULTURES OF TAXUS SPECIES
TC/Art Unit : 1651
Examiner: : Irene Marx

Docket No. : 62698.000061
Customer No. : 21967

MAIL STOP RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98, and in compliance with the duty of disclosure set forth in 37 C.F.R. § 1.56, Applicants submit attached Form PTO/SB/08A (modified) for consideration and request the references cited therein be made of record by the U.S. Patent and Trademark Office ("Patent Office") in the above-captioned application ("the Application").

In accordance with 37 C.F.R. § 1.98(a)(2), Applicants submit a copy of each of the cited references, except U.S. patents and/or U.S. patent application publications, herewith. In considering the cited references, it may be noted by the Examiner that certain of the references may contain markings, underlinings, and/or other notations. These markings, underlinings, and/or other notations are not to be construed as drawing the Examiner's attention either to selected parts or away from other parts of the cited references. Any such markings were either present on the copies of the cited references obtained by the associated individuals, or were made thereon during the study of the references by the associated individuals.

Applicants respectfully point out that the submission of the listed references in this Information Disclosure Statement is not an admission that they are prior art or that they are

material to patentability of any claims of the Application. Also, the submission of this Information Disclosure Statement is not an indication that a search has been made by Applicants.

Consideration of the foregoing plus the prompt return of a copy of the enclosed Form PTO/SB/08A with the Examiner's initials in the left column in accordance with M.P.E.P. § 609 are respectfully requested.

This Information Disclosure Statement is being submitted with a Request for Continued Examination and the required fee. Therefore, it is believed that no additional fee is due with this Information Disclosure Statement. However, in the event any variance exists between the amount enclosed and the amount determined by the Patent Office, the Commissioner is hereby authorized to charge or credit any such variance to the undersigned's Deposit Account No. 50-0206.

Respectfully submitted,

HUNTON & WILLIAMS LLP

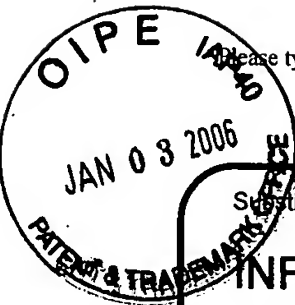
Dated: January 3, 2006

By: Victoria A. Silcott
Laurence H. Posorske
Registration No. 34,698

Victoria A. Silcott
Registration No. 57,443

Hunton & Williams LLP
Intellectual Property Department
1900 K Street, N.W.
Suite 1200
Washington, DC 20006
(202) 955-1500 (telephone)
(202) 778-2201 (facsimile)
LHP/VAS/asc

+



Please type a plus sign (+) inside this box



PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

2

of

4

Complete if Known

Application Number	09/083,198
Filing Date	May 22, 1998
First Named Inventor	Venkataraman BRINGI, et al.
Group Art Unit	1651
Examiner Name	Irene Marx
Attorney Docket Number	62698.000061

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	3.	Xu, L.X., et al., "Determination of Taxol in the Extract of <i>Taxus chinensis</i> by Reversed Phase HPLC," Acta Pharmaceutica Sinica, 24(7):552-555 (1989).	
	4.	Payne, G., et al., "Plant Cell and Tissue Culture in Liquid System", 62-66 & 296-297 (Hanser Publishers 1991).	
	5.	Di, C.K., et al., "Primary Research on Production of Callus From <i>Taxus chinensis</i> var. <i>mairei</i> ," Abstract from Annual Meeting of Beijing Plant Physiology Society (1991).	
	6.	Yamakawa, T., et al., "Production of Anthocyanins by <i>Vitis</i> Cells in Suspension Culture," Agric. Biol. Chem., 47(10):2185-2191 (1983).	
	7.	Robins, R.J. and M.J.C. Rhodes, "The Stimulation of Anthraquinone Production by <i>Cinchona ledgeriana</i> Cultures with Polymeric Adsorbents," Appl. Microbiol. Biotechnol., 24:35-41 (1986).	
	8.	"Plant and Animal Cells: Process Possibilities", 29-30 (C. Webb and F. Mavituna eds., Ellis Horwood Limited 1987).	
	9.	Kim, D., et al, "Two Stage Cultures for the Production of Berberine in Cell Suspension Cultures of <i>Thalictrum rugosum</i> ," Journal of Biotechnology, 16:297-303 (1990).	
	10.	5141: Jasmone, The Merck Index, 827 (Susan Budavari ed., Merck & Co., Inc. 11th ed. 1989).	
	11.	Toder, B.H., et al., "Regiospecific Methylation of Cyclopentenone Derivatives," Synthetic Communications, 5(6):435-439 (1975).	
	12.	The Difco Manual, Section VI: Peptones & Hydrolysates Selection Guide, 829, (11th ed.).	
	13.	Cormier, F., et al., "Effects of Sucrose Concentration on the Accumulation of Anthocyanins in Grape (<i>Vitis vinifera</i>) Cell Suspension," Can. J. Bot., 68:1822-1825 (1990).	
	14.	Fujita, Y. and Y. Hara, "The Effective Production of Shikonin by Cultures with an Increased Cell Population," Agric. Biol. Chem., 49(7):2071-2075 (1985).	
	15.	Matsubara, K., et al., "High Density Culture of <i>Coptis japonica</i> Cells Increases Berberine Production," J. Chem. Tech. Biotechnol. 46:61-69 (1989).	
	16.	Mantell, S.H., et al., "The Effect of Initial Phosphate and Sucrose Levels on Nicotine Accumulation in Batch Suspension Cultures of <i>Nicotiana tabacum</i> L.," Plant Cell Reports, 2:73-77 (Springer-Verlag 1983).	

Examiner
Signature

Date
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Please type a plus sign (+) inside this box



PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet

3

of

4

Complete if Known

Application Number	09/083,198
Filing Date	May 22, 1998
First Named Inventor	Venkataraman BRINGI, et al.
Group Art Unit	1651
Examiner Name	Irene Marx
Attorney Docket Number	62698.000061

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	17.	Yeoman, M.M., et al., "Accumulation of Secondary Products as a Facet of Differentiation in Plant Cell and Tissue Culture", Differentiation <i>In Vitro</i> , The Fourth Symposium of the British Society for Cell Biology, 65-82 (Cambridge University Press 1982).	
	18.	Moore, T.C., Biochemistry and Physiology of Plant Hormones, 33-39, (Springer-Verlag New York Inc., 2nd ed. 1989).	
	19.	George, E.F., et al., Plant Culture Media, Vol. 1: Formulations and Uses, 427-441 & Table 1 (Exegetics Ltd. 1987).	
	20.	Wysokinska, H. and L. Swiatek, "Production of Iridoid Glucosides in Cell Suspension Cultures of <i>Penstemon serulatus</i> . Effects of Nutritional Factors," Plant Science, 76:249-258 (1991).	
	21.	Yun, J.W., et al., "Optimizations of Carotenoid Biosynthesis by Controlling Sucrose Concentration," Biotechnology Letters, 12(12):905-910 (1990).	
	22.	Schiel, O., et al., "Increased Formation of Cinnamoyl Putrescines by Fedbatch Fermentation of Cell Suspension Cultures of <i>Nicotiana tabacum</i> ," Plant Cell Reports, 3:18-20 (1984).	
	23.	Miyasaka, H., et al., "Effect of Nutritional Factors on Cryptotanshinone and Ferruginol Production by Cell Suspension Cultures of <i>Salvia miltiorrhiza</i> ," Phytochemistry, 26(5):1421-1424 (1987).	
	24.	Bramble, J.L and D.J. Graves, "Calcium and Phosphate Effects on Growth and Alkaloid Production in <i>Coffea arabica</i> . Experimental Results and Mathematical Model," Biotechnology and Bioengineering, 37:859-868 (1991).	
	25.	Mantell, S.H. and H. Smith, "Cultural Factors That Influence Secondary Metabolite Accumulation in Plant Cell and Tissue Cultures," Plant Biotechnology, 75-108 (S.H. Mantell and H. Smith eds., Cambridge University Press 1984).	
	26.	Payne, G., et al., "Plant Cell and Tissue Culture in Liquid Systems," 49-70 (Hansen Publishers 1992).	
	27.	Fett-Neto, A.G., et al., "Kinetics of Taxol Production, Growth, and Nutrient Uptake in Cell Suspensions of <i>Taxus cuspidata</i> ," Biotechnology and Bioengineering, 44:205-210 (1994).	
	28.	Srinivasan, V., et al., "Taxol Production in Bioreactors: Kinetics of Biomass Accumulation, Nutrient Uptake, and Taxol Production by Cell Suspensions of <i>Taxus baccata</i> ," Biotechnology and Bioengineering, 47:666-676 (1995).	
	29.	Hezari, M., et al., "Taxol Production and Taxadiene Synthase Activity in <i>Taxus canadensis</i> Cell Suspension Cultures," Archives of Biochemistry and Biophysics, 337(2):185-190, (1997).	
	30.	Mei, X., et al., "Kinetics of Taxol Biosynthesis in Bioreactors," Med. Chem. Res., 6:256-263 (1996).	
	31.	Taiz, L. and E. Zeiger, "Water and Plant Cells," Plant Physiology, 61 (The Benjamin/Cummings Publishing Company, Inc. 1991).	

Examiner
SignatureDate
Considered

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box



PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

4

of

4

Complete if Known

Application Number	09/083,198
Filing Date	May 22, 1998
First Named Inventor	Venkataraman BRINGI, et al.
Group Art Unit	1651
Examiner Name	Irene Marx
Attorney Docket Number	62698.000061

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	32.	Dougall, D.K., "Chemicals from Plant Cell Cultures: Yields and Variation," Biotechnology in Plant Science: Relevance to Agriculture in the Eighties, 179-190 (Zaitlin, et al. eds., Academic Press, Inc. 1985).	
	33.	Dougall, D.K. and K.W. Weyrauch, "Growth and Anthocyanin Production by Carrot Suspension Cultures Grown Under Chemostat Conditions with Phosphate as the Limiting Nutrient," Biotechnology and Bioengineering, 22(2):337-352 (1980). (Abstract)	
	34.	Sahai, O.P. and M.L. Shuler, "Environmental Parameters Influencing Phenolics Production by Batch Cultures of <i>Nicotiana tabacum</i> ," Biotechnology and Bioengineering, 26(2):111-120 (1984). (Abstract)	
	35.	Tabata, M. and Y. Fujita, "Production of Shikonin by Plant Cell Cultures", Biotechnology in Plant Science: Relevance to Agriculture in the Eighties, 207-218 (Zaitlin, et al. eds., Academic Press, Inc. 1985).	

Examiner
Signature

Date
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.